From: McKenna, Jim
To: Eric Blischke/R10/USEPA/US@EPA
Subject: RE: Benthic Evaluation Task
Date: 08/13/2008 04:07 PM

Thanks, I'll forward to John and see what he thinks. Jim.

-----Original Message-----
From: Blischke.Eric@epamail.epa.gov
[mailto:Blischke.Eric@epamail.epa.gov]
Sent: Wednesday, August 13, 2008 3:46 PM
To: McKenna, Jim
Subject: Benthic Evaluation Task

Jim, here are the questions we asked Don MacDonald to answer. Please provide any thoughts.

Eric

Task:

Because the LWG and EPA have not been able to reach agreement, we have requested your assistance as an impartial reviewer to review the existing data and make recommendations about the evaluation of the empirical toxicity. Specifically we request you evaluate the existing data and the state of the science to answer the following questions:

1) What hit/no-hit criteria should be applied to the empirical sediment toxicity tests?
2) What pooling of endpoints, if any, should be applied for use in each of the predictive models? Pooling may include pooling the growth (total biomass) and mortality endpoints for each test organism (2 endpoints) or both test organisms (1 endpoint) and the application of the RSET one-hit/2-hit criteria.
3) What hit/no-hit criteria should be applied for the logistic regression and floating percentile models? Note that one, two or three criteria may be applied to each endpoint and each model. However, this will increase the amount of work required to develop the models.
4) Should non-site data be considered in the development of the logistic regression model?
5) Once the models have been run, what analysis, if any, should be performed to optimize model performance?
6) Should the predictive models be used at all given their reliability?
7) How should the results of the predictive models be used, in conjunction with other site data, in a weight of evidence evaluation aimed at assessing risk to the benthic community?

Please provide supporting information for all recommendations.